STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING ERROR REPORT

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Application Serial Number:	/0/534,742
Source:	, PG 110
Date Processed by STIC:	5/20/05

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FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

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http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm

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- 1. EFS-Bio (http://www.uspto.gov/ebc/efs/downloads/documents.htm, EFS Submission User Manual ePAVE)
- 2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
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 U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street,
 Alexandria, VA 22314

Revised 01/24/05



PCT

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/534,742

DATE: 05/20/2005 TIME: 12:13:02

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low
              allergenicity
     8 <130> FILE REFERENCE: 4161-12 / BW330R
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     11 <141> CURRENT FILING DATE: 2005-05-12
    13 <150> PRIOR APPLICATION NUMBER: PCT/IB2003/005092
     14 <151> PRIOR FILING DATE: 2003-11-12
     16 <150> PRIOR APPLICATION NUMBER: IT BO2002A000714
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17 <151> PRIOR FILING DATE: 2002-11-13

19 <160> NUMBER OF SEQ ID NOS: 44

21 <170> SOFTWARE: MS Word

23 <210> SEQ ID NO: 1

ERRORED SEQUENCES

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15
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42 50 55 60

44 Pro Val Ala Arg Gln Tyr Glu Gln Gln Val Val Val Pro Pro Lys Gly

45 65 70 75 80

47 Gly Ser Phe Tyr Pro Gly Glu Thr Thr Pro Pro Gln Gln Leu Gln Gln

48 85 90 95

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51 100 105 110

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54 115 120

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59 Tyr Leu Thr Ser Pro Gln Gln Ser Gly Gln Trp Gln Gln Pro Gly Gln 150 155

62 Gly Gln Ala Gly Tyr Tyr Pro Thr Ser Pro Gln Gln Ser Gly Gln Glu

Mr 1,3,5,8,10,12,1 14,16,18-19,21

Does Not Comply Corrected Diskette Neede

5/20/05





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	Leu	Ara	Gln	Gly	Gln	Gln	Glv	Gln	Gln	Ser	Glv	Gln	Glv	Gln	Pro	Ara
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	Tvr		Pro	Thr	Ser	Ser		Gln	Pro	Glv	Gln		Gln	Gln	Leu	Ala
	225	-1-				230	· · · · ·	0		0-7	235		U			240
		Glv	Gln	Gln	Glv		Gln	Pro	Glu	Ara		Gln	Gln	Glv	Gln	
78	0111	Ory	0111	0111	245	01	01	110	Olu	250	O ₁		01	011	255	· · · ·
	Sar	Gly	Gln	Gly		Gln	Τ.Δ11	Glv	Gln		Gln	Gln	Glv	Gln		Pro
81	DCI	Gry	0111	260	OIII	0111	D Cu	CLY	265	O _L y	0111	01	Cry	270	0411	110
	C1.,	Cln	Two	Gln	Cln	cor	Clv	Gln		Gln	Gln	G1v	ጥኒም		Dro	Tla
84	Gry	GIII	275	GIII	GIII	261	GIY	280	Gry	GIII	GIII	Gry	285	171	110	110
	Cor	Dro		Gln	LON	Clu	Cln		Gln	Cln	Sar	Clv		Glv	Gln	T.OU
87	Ser	290	GIII	GIII	пеп	GIY	295	Gry	GIII	GIII	361	300	GIII	GIY	GIII	пеа
	~1		Ψ··~	Pro	πh∽	Cox		Cln	Cln	C02	C111		C1++	Cln	cor	Clu
	305	ıyı	ıyı	PIO	1111	310	FIO	GIII	GIII	SET	315	GIII	Gry	GIII	261	320
		Mr rac	Dwo	Thr	Cor		C1 n	Cln	Dro	C1		Ton	Cln	Cln	cor	
	TAT	TAT	PIO	1111	325	Ala	GIII	GIII	PIO	330	GIII	ъец	GIII	GIII	335	1111
93	C1 =	C1	C1 -	~1 ~		~1	C1 =	C1.,	Cln		7 an	C15	~1 n	C0~		Cln
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	Cla	, Clr	355	. Cln	G3 n	Dro	. G13		1 Arc	r Glr	Pro	വ	365 . Tur	· Մ\17	· Car	Thr
101	-		Gly	Gln	Gln	Pro	_	/ Glr	n Arg	g Glr	n Pro	_	туг туг	туг	: Ser	Thr
102	?	370	Gly				375	Glr				380	Tyr	_		
102 102 104	e Ser	370 Pro	Gly			Gly	375 Glr	Glr			Arg	380 Tyr	Tyr	_		Ser
101 102 104 109	Ser 385	370 Pro	Gly Gln	ı Gln	. Leu	Gly 390	375 Glr	Glr Gly	/ Glr	n Pro	Arg 395	380 Tyr	Tyr Tyr	Pro	Thr	Ser 400
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100 100 100 100 110 110 110 110 110 110	Ser	370 FPC FPC FPC FPC FPC FPC FPC FPC FPC FPC	Gly Glm Gly Gly Gly 435 Glm Ser Gly Gly Gly Gly Gly Gly Gly Gl	Gln 420 Gln Fro Gln Gly Gln Gly Gln Gly Gln Gly Gln	Gly Gly Gly Gly Gln Leu 485 Gln Ser	Gly Gly Gln Gly Gln Gly Gln Gly Gln Gly Gln Gln Gln Gln Gln Gln Gln	375 7 Glr 7 Glr 8 Glr 9 Glr	Glr Glr Glr Glr Glr Glr Glr Glr	Glr	Production	Arg 395 Arg Gln Gln Tyr 475 Gly Gln Pro	380 Tyr Glr Gly Gly Glr Glr Glr Glr Ser	Tyr Tyr Tyr Tyr Tyr Glr 445 Pro Thr Glr Glr Tyr S25	Property of the Property of Trys	o Thr 415 1 Gly 2 Glr 3 Ser 495 495 1 Pro	Ser 400 Pro Gln 480 Gln Pro Thr





RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/534,742

TIME: 12:13:02

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Output Set: N:\CRF4\05202005\J534742.raw

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210 Pro Val Ala Arg Gln Tyr Glu Gln Gln Val Val Pro Pro Lys Gly





211	<i>C</i> E					70					75					80
211		Cox	Dho	T1	Dro	_	C1	The	Th∽	Dro		Cln	Cln	T 011	C15	-
	GIY	ser	Pne	ıyı	Pro	GIY	GIU	1111	1111		PIO	GIII	GIII	ьеu		GIII
214	0	т3 -	*	M	85	*1.	D	» l	T	90	7	7	(T)= +==	TT	95	C
	ser	me	Leu	_	Gly	шe	PIO	Ala		Leu	Arg	Arg	lyr		Leu	Ser
217	,	m)	a	100	~1 .	~1	**- 7	0	105	.	D	~ 3	a 1.	110		0
	vai	Thr		Pro	Gl'n	GIn	vai		ıyr	Tyr	Pro	GIY		Ala	ser	ser
220		_	115					120		_	_	_	125	_	_	~-3
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		Ser	Gly	GIn	Trp		GIn	Pro	GLY	GIn	_	GIn	Ser	GLy	Tyr	
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265	~ 1	01	355	~1	D	~1		360	0	m 1		D	365	G3	.	G3
	GIY		Arg	GIN	Pro	GIY	_	Tyr	ser	Thr	ser		GIN	GIN	ьeu	GIY
268	~ 1.	370	a 1		•		375	n	ml		5	380	63	D	~1	01
		GIY	GIN	Pro	Arg		Tyr	Pro	Thr	ser		GIN	GIN	Pro	GIY	
	385	~ 3 .	-	n		390		~ 1.	~1	.	395	a1 .	a 1	a1	~ 1	400
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277	G3	a.	03	420	D -	a?	a 3	0 7	425	G 3	αz ·	~ 1	a 1 -	430	a 1	01
	GIn	GIY		Gin	Pro	GTA	GIn	_	Gin	GIN	GTA	GIn		Pro	GIY	GIN
280	~ ?	a z	435	a 3	_		_	440		-	~ 2	~ 3	445	67	~ 3	61
	GIY		Pro	GLY	Tyr	Tyr		Thr	ser	Pro	GIn		ser	GIY	GIn	GTA
283		450					455					460				





Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\05202005\J534742.raw

285 Gln Pro Gly Tyr Tyr Pro Thr Ser Pro Gln Gln Ser Gly Gln Leu Gln 475 286 465 288 Gln Pro Ala Gln Gly Gln Gln Pro Gly Gln Glu Gln Gln Gly Gln Gln 291 Pro Gly Gln Gly Gln Pro Gly Gln Gly Gln Pro Gly Tyr Tyr Pro 505 500 294 Thr Ser Pro Gln Gln Ser Gly Gln Glu Gln Leu Glu Gln Trp Gln 515 520 297 Gln Ser Gly Gln Gly Gln Pro Gly His Tyr Pro Thr Ser Pro Leu Gln 535 300 Pro Gly Gln Gly Gln Pro Gly Tyr Tyr Pro Thr Ser Pro Gln Gln Ile 555 550 303 Gly Gln Gly Gln Gln Pro Gly Gln Leu Gln Gln Pro Thr Gln Gly Gln 565 570 306 Gln Gly Gln Gln Pro Gly Gln Gly Gln Gly Gln Gln Pro Gly Glu 585 309 Gly Gln Gln Gly Gln Gln Pro Gly Gln Gly Gln Gln Pro Gly Gln Gly 312 Gln Pro Gly Tyr Tyr Pro Thr Ser Leu Gln Gln Ser Gly Gln Gly Gln 615 315 Gln Pro Gly Gln Trp Gln Gln Pro Gly Gln Gly Gln Pro Gly Tyr Tyr 630 635 318 Pro Thr Ser Ser Leu Gln Pro Glu Gln Gly Gln Gln Gly Tyr Tyr Pro 645 650 321 Thr Ser Gln Gln Gln Pro Gly Gln Gly Pro Gln Pro Gly Gln Trp Gln 665 324 Gln Ser Gly Gln Gly Gln Gln Gly Tyr Tyr Pro Thr Ser Pro Gln Gln 685 675 680 327 Ser Gly Gln Gly Gln Pro Gly Gln Trp Leu Gln Pro Gly Gln Trp 330 Leu Gln Ser Gly Tyr Tyr Leu Thr Ser Pro Gln Gln Leu Gly Gln Gly 710 715 333 Gln Gln Pro Arg Gln Trp Leu Gln Pro Arg Gln Gly Gln Gln Gly Tyr 725 730 336 Tyr Pro Thr Ser Pro Gln Gln Ser Gly Gln Gly Gln Leu Gly Gln 740 745 339 Gly Gln Gln Gly Tyr Tyr Pro Thr Ser Pro Gln Gln Ser Gly Gln Gly 760 342 Gln Gln Gly Tyr Asp Ser Pro Tyr His Val Ser Ala Glu His Gln Ala 770 775 780 345 Ala Ser Leu Lys Val Ala Lys Ala Gln Gln Leu Ala Ala Gln Leu Pro 790 795 348 Ala Met Cys Arg Leu Glu Gly Gly Asp Ala Leu Leu Ala Ser Gln 805 352 <210> SEQ ID NO: 3 useit 22207 353 <211> LENGTH: 839 354 <212> TYPE: PRT 355 <213> ORGANISM: Wheat 357 <223> OTHER INFORMATION: Dx5



Input Set : A:\Sequence Listing.txt Output Set: N:\CRF4\05202005\J534742.raw

E>				-									_		_		
			Ala	Lys	Arg	Leu	Val	Leu	Phe	Val	Ala	Val	Val	Val	Ala	Leu	Val
	362					5					10					15	
	364	Ala	Leu	Thr	Val	Ala	Glu	Gly	Glu		Ser	Glu	Gln	Leu	Gln	Cys	Glu
	365				20					25					30		
	367	Arg	Glu	Leu	Gln	Glu	Leu	Gln		Arg	Glu	Leu	Lys	Ala	Cys	Gln	Gln
	368			35					40					45			
	370	Val	Met	Asp	Gln	Gln	Leu	Arg	Asp	Ile	Ser	Pro	Glu	Cys	His	Pro	Val
	371		50					55					60				
	373	Val	Val	Ser	Pro	Val	Ala	Gly	Gln	Tyr	Glu	Gln	Gln	Ile	Val	Val	Pro
	3 74						70					75					80
	376	Pro	Lys	Gly	Gly	Ser	Phe	Tyr	Pro	Gly	Glu	Thr	Thr	Pro	Pro	Gln	Gln
	3 77		_	_		85			_	_	90	_				95	
	379	Leu	Gln	Gln	Arg	Ile	Phe	\mathtt{Trp}	Gly	Ile	Pro	Ala	Leu	Leu	Lys	Arg	Tyr
	380				100					105					110		
		Tyr	Pro		Val	Thr	Cys	Pro		Gln	Val	Ser	Tyr	_	Pro	Gly	Gln
	383	_		115	_			_	120		_	_		125	_	_	_
		Ala		Pro	Gln	Arg	Pro	Gly	Gln	Gly	Gln	Gln		Gly	Gln	Gly	Gln
	386		130					135					140		_		
			Gly	Tyr	Tyr	Pro		Ser	Pro	Gln	Gln		Gly	Gln	Trp	Gln	
		145					150		_	_	_	155	_	_			160
		Pro	GIu	GIn	Gly		GIn	Gly	Tyr	Tyr		Thr	Ser	Pro	GIn		Pro
	392	~ 7		_	~3	165	_		~-3	~3	170	~3	_	~-7	~7	175	~-3
		GIY	GIn	Leu		GIn	Pro	Ala	GIn	_	GIn	GIn	Pro	GIY		GIY	GIn
	395	~ 1	01	~ 1	180	D	~ 1	~ 1	a 1	185	D	à1	m	m	190	m1	0
		GIN	GIY		GIN	Pro	GIY	Gln	_	GIN	Pro	GIY	Tyr	_	Pro	Thr	ser
	398	0	~1	195	~1 ~	D	~ 1	~1	200	01 -	~1 ·-	Desc	7 J -	205	~1	C1	~1 ~
		ser		ьeu	GIII	PIO	GIY	Gln	ьeu	GIII	GIII	PIO		GIII	GIY	GIII	GIII
	401	G1	210	C1 -	Dwo	~1	~1 ~	215	~1 ~	~1 n	~1	<u>ما ب</u>	220	Dwa	c1	C1 5	~1
	403	_	GIII	GIII	PIO	GIY	230	Ala	GIII	GIII	GIY	235	GIII	PIO	GIY	GIII	240
			Cln	Dro	Clv	Cln		Gln	Cln	C111	Cln		Dro	Clv	Cln	Clv	
	407	GIII	GIII	FIO	Gry	245	Gry	GIII	GIII	Gry	250	GIII	110	. Gry	GIII	255	GIII
		Gln	Pro	Glv	Gln		Gln	Gln	Glv	Gln		T.011	Glv	Gln	Glv		Gln
	410	G111	110	Gry	260	Gry	0111	0111	Gry	265	GIII	пси	Gry	0111	270	OII.	0111
		Glv	Tvr	Tvr		Thr	Ser	Leu	Gln		Ser	Glv	Gln	Glv		Pro	Glv
	413	017	-] -	275				200	280	02		4 -1	0111	285	01		017
		Tvr	Tvr		Thr	Ser	Leu	Gln		Len	Glv	Gln	Glv		Ser	Glv	Tvr
	416	-1-	290					295	02		0-1	0-11	300	0		- 1	-1-
		Tvr		Thr	Ser	Pro	Gln	Gln	Pro	Glv	Gln	Glv		Gln	Pro	Glv	Gln
	419	_					310			1		315				1	320
			Gln	Gln	Pro	Ala		Gly	Gln	Gln	Pro	Glv	Gln	Glv	Gln	Gln	
	422					325		- 1			330					335	-
		Gln	Gln	Pro	Gly	Gln	Gly	Gln	Gln	Gly		Gln	Pro	Gly	Gln	Gly	Gln
	425				340		2			345				2	350	- 4	
		Gln	Pro	Gly		Glv	Gln	Pro	Gly		Tyr	Pro	Thr	Ser		Gln	Gln
	428		-	355		- 4		-	360	_				365			
		Ser	Gly		Gly	Gln	Pro	Gly		Tyr	Pro	Thr	Ser		Gln	Gln	Pro
	431		370		•			375	-	•			380				





Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\05202005\J534742.raw

433 Thr Gln Ser Gln Gln Pro Gly Gln Gly Gln Gly Gln Gln Val Gly 434 385 436 Gln Gly Gln Gln Ala Gln Gln Pro Gly Gln Gly Gln Pro Gly Gln 439 Gly Gln Pro Gly Tyr Tyr Pro Thr Ser Pro Gln Gln Ser Gly Gln Gly 420 425 442 Gln Pro Gly Tyr Tyr Leu Thr Ser Pro Gln Gln Ser Gly Gln Gly Gln 435 440 445 Gln Pro Gly Gln Leu Gln Gln Ser Ala Gln Gly Gln Lys Gly Gln Gln 455 448 Pro Gly Gln Gly Gln Pro Gly Gln Gly Gln Gln Gly Gln Pro 470 475 451 Gly Gln Gly Gln Gly Gln Gln Pro Gly Gln Gly Gln Pro Gly Tyr 485 490 454 Tyr Pro Thr Ser Pro Gln Gln Ser Gly Gln Gln Gln Pro Gly Gln 505 457 Trp Gln Gln Pro Gly Gln Gly Gln Pro Gly Tyr Tyr Pro Thr Ser Pro 460 Leu Gln Pro Gly Gln Gly Gln Pro Gly Tyr Asp Pro Thr Ser Pro Gln 535 540 463 Gln Pro Gly Gln Gly Gln Pro Gly Gln Leu Gln Gln Pro Ala Gln 550 466 Gly Gln Gln Gly Gln Gln Leu Ala Gln Gly Gln Gln Gly Gln Pro 565 570 469 Ala Gln Val Gln Gln Gly Gln Pro Ala Gln Gly Gln Gly Gln 585 472 Gln Leu Gly Gln Gly Gln Gly Gln Gln Pro Gly Gln Gly Gln Gln 595 600 475 Gly Gln Gln Pro Ala Gln Gly Gln Gly Gln Gln Pro Gly Gln Gly 615 478 Gln His Gly Gln Gln Pro Gly Gln Gly Gln Gly Gln Gln Pro Gly 481 Gln Gly Gln Gln Pro Gly Gln Gly Gln Pro Trp Tyr Tyr Pro Thr Ser 484 Pro Gln Glu Ser Gly Gln Gly Gln Pro Gly Gln Trp Gln Gln Pro 665 487 Gly Gln Gly Gln Pro Gly Tyr Tyr Leu Thr Phe Ser Val Ala Ala Arg 680 490 Thr Gly Gln Gln Gly Tyr Tyr Pro Thr Ser Leu Gln Gln Pro Gly Gln 690 695 493 Gly Gln Gln Pro Gly Gln Trp Gln Gln Ser Gly Gln Gly Gln His Trp 710 715 496 Tyr Tyr Pro Thr Ser Pro Lys Leu Ser Gly Gln Gly Gln Arg Pro Gly 725 730 499 Gln Trp Leu Gln Pro Gly Gln Gly Gln Gln Gly Tyr Tyr Pro Thr Ser 745 502 Pro Gln Gln Pro Pro Gln Gly Gln Gln Leu Gly Gln Trp Leu Gln Pro 505 Gly Gln Gly Gln Gly Tyr Tyr Pro Thr Ser Leu Gln Gln Thr Gly



DATE: 05/20/2005

TIME: 12:13:02

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/534,742

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\05202005\J534742.raw

770 775 506 508 Gln Gly Gln Gln Ser Gly Gln Gly Gln Gly Tyr Tyr Ser Ser Tyr 511 His Val Ser Val Glu His Gln Ala Ala Ser Leu Lys Val Ala Lys Ala 810 805 514 Gln Gln Leu Ala Ala Gln Leu Pro Ala Met Cys Arg Leu Glu Gly Gly 820 825 517 Asp Ala Leu Ser Ala Ser Gln 835 521 <210> SEQ ID NO: 4 uset (2207 522 <211> LENGTH: 838 523 <212> TYPE: PRT 524 <213> ORGANISM: Wheat 526 <223> OTHER INFORMATION: HMW2 E--> 528 <400> SEQUENCE: 4 530 Met Ala Lys Arg Leu Val Leu Phe Val Ala Val Val Ala Leu Val 533 Ala Leu Thr Val Ala Glu Gly Glu Ala Ser Glu Gln Leu Gln Cys Glu 536 Arg Glu Leu Gln Glu Leu Gln Glu Arg Glu Leu Lys Ala Cys Gln Gln 539 Val Met Asp Gln Gln Leu Arg Asp Ile Ser Pro Glu Cys His Pro Val 542 Val Val Ser Pro Val Ala Gly Gln Tyr Glu Gln Gln Ile Val Val Pro 545 Lys Gly Gly Ser Phe Tyr Pro Gly Glu Thr Thr Pro Pro Gln Gln Leu 85 90 548 Gln Gln Arg Ile Phe Trp Gly Ile Pro Ala Leu Leu Lys Arg Tyr Tyr 105 551 Pro Ser Val Thr Ser Pro Gln Gln Val Ser Tyr Tyr Pro Gly Gln Ala 115 120 554 Ser Pro Gln Arg Pro Gly Gln Gly Gln Pro Gly Gln Gly Gln Gln 557 Ser Gly Gln Gly Gln Gln Tyr Tyr Pro Thr Ser Pro Gln Gln Pro 150 155 560 Gly Gln Trp Gln Gln Pro Glu Gln Gly Gln Pro Gly Tyr Tyr Pro Thr 170 563 Ser Pro Gln Gln Pro Gly Gln Leu Gln Gln Pro Ala Gln Gly Gln Gln 185 180 566 Pro Gly Gln Gly Gln Gly Arg Gln Pro Gly Gln Gly Gln Pro Gly 195 200 569 Tyr Tyr Pro Thr Ser Ser Gln Leu Gln Pro Gly Gln Leu Gln Gln Pro 215 572 Ala Gln Gly Gln Gly Gln Gln Pro Gly Gln Gly Gln Gly Gln 235 575 Gln Pro Gly Gln Gly Gln Pro Gly Gln Gly Gln Gly Gln Gln Gln Gln 578 Pro Gly Gln Gly Gln Gln Pro Gly Gln Gly Gln Gly Gln Gln Leu 265





	Gly	Gln	Gly	Gln	Gln	Gly	Tyr	Tyr	Pro	Thr	Ser	Leu		Gln	Ser	Gly
582			275					280					285			
584	Gln	Gly	Gln	Pro	Gly	Tyr	Tyr	Pro	Thr	Ser	Leu	Gln	Gln	Leu	Gly	Gln
585		290					295					300				
587	Gly	Gln	Ser	Gly	Tyr	Tyr	Pro	Thr	Ser	Pro		Gln	Pro	Gly	Gln	Gly
588	305					310					315					320
590	Gln	Gln	Pro	Gly	Gln	Leu	Gln	Gln	Pro	Ala	Gln	Gly	Gln	Gln	Pro	Glu
591					325					330					335	
593	Gln	Gly	Gln	Gln	Gly	Gln	Gln	Pro	Gly	Gln	Gly	Gln	Gln	Gly	Gln	Gln
594				340					345					350		
596	Pro	Gly	Gln	Gly	Gln	Gln	Pro	Gly	Gln	Gly	Gln	Pro	Gly	Tyr	Tyr	Pro
597			355					360					365			
599	Thr	Ser	Pro	Gln	Gln	Ser	Gly	Gln	Gly	Gln	Pro	Gly	Tyr	Tyr	Pro	Thr
600		370					375					380				
602	Ser	Ser	Gln	Gln	Pro	Thr	Gln	Ser	Gln	Gln	Pro	Gly	Gln	Gly	Gln	Gln
603	385					390					395					400
605	Gly	Gln	Gln	Val	Gly	Gln	Gly	Gln	Gln	Ala	Gln	Gln	Pro	Gly	${\tt Gln}$	Gly
606					405					410					415	
608	Gln	Gln	Pro	Gly	Gln	Gly	Gln	Pro	Gly	Tyr	Tyr	Pro	Thr	Ser	Pro	Leu
609				420					425					430		
611	Gln	Ser	Gly	Gln	Gly	Gln	Pro	Gly	Tyr	Tyr	Leu	Thr	Ser	Pro	${\tt Gln}$	Gln
612			435					440					445			
614	Ser	Gly	Gln	Gly	Gln	Gln	Pro	Gly	Gln	Leu	Gln	Gln	Ser	Ala	Gln	Gly
615		450					455					460				
617	Gln	Lys	Gly	Gln	Gln	Pro	Gly	Gln	Gly	Gln	Gln	Pro	Gly	Gln	Gly	Gln
618	465					470					475					480
620	Gln	Gly	Gln	Gln	Pro	Gly	Gln	Gly	Gln	Gln	Gly	Gln	Gln	Pro	Gly	Gln
621					485					490					495	
623	Gly	Gln	Pro	Gly	Tyr	Tyr	Pro	Thr	Ser	Pro	Gln	Gln	Ser	Gly	Gln	Gly
624				500					505					510		
626	Gln	Gln	Pro	Gly	Gln	Trp	Gln	Gln	Pro	Gly	Gln	Gly	Gln	Pro	Gly	Tyr
627			515					520					525			
629	Tyr	Pro	Thr	Ser	Pro	Leu	Gln	Pro	Gly	Gln	Gly	Gln	Pro	Gly	Tyr	Asp
630		530					535					540				
632	Pro	Thr	Ser	Pro	Gln	Gln	Pro	Gly	Gln	Gly	Gln	Gln	Pro	Gly	Gln	Leu
633	545					550					555					560
635	Gln	Gln	Pro	Ala	Gln	Gly	Gln	Gln	Gly	Gln	Gln	Leu	Ala	Gln	Gly	Gln
636					565					570					575	
638	Gln	Gly	Gln	Gln	Pro	Ala	Gln	Val	Gln	Gln	Gly	Gln	Gln	Pro	Ala	Gln
639				580					585					590		
641	Gly	Gln	Gln	Gly	Gln	Gln	Leu	Gly	Gln	Gly	Gln	Gln	Gly	Gln	Gln	Pro
642			595					600					605			
644	Gly	Gln	Gly	Gln	Gln	Pro	Ala	Gln	Gly	Gln	Gln	Gly	Gln	Gln	Pro	Gly
645		610					615					620				
647	Gln	Gly	Gln	Gln	Gly	Gln	Gln	Pro	Gly	Gln	Gly	Gln	Gln	Pro	Gly	Gln
648		_			-	630			-		635				-	640
650	Gly	Gln	Pro	Trp	Tyr	Tyr	Pro	Thr	Ser	Pro	Gln	Glu	Ser	Gly	Gln	Gly
651	-			_	645	-				650				-	655	-
653	Gln	Gln	Pro	Gly	Gln	Trp	Gln	Gln	Pro	Gly	Gln	Trp	Gln	Gln	Pro	Gly
				-		-				-		_				-



DATE: 05/20/2005 PATENT APPLICATION: US/10/534,742 TIME: 12:13:02

Input Set : A:\Sequence Listing.txt Output Set: N:\CRF4\05202005\J534742.raw

RAW SEQUENCE LISTING

660 665 654 656 Gln Gly Gln Pro Gly Tyr Tyr Leu Thr Ser Pro Leu Gln Leu Gly Gln 659 Gly Gln Gln Gly Tyr Tyr Pro Thr Ser Leu Gln Gln Pro Gly Gln Gly 695 662 Gln Gln Pro Gly Gln Trp Gln Gln Ser Gly Gln Gly Gln His Gly Tyr 710 715 665 Tyr Pro Thr Ser Pro Gln Leu Ser Gly Gln Gly Gln Arg Pro Gly Gln 730 725 668 Trp Leu Gln Pro Gly Gln Gly Gln Gln Gly Tyr Tyr Pro Thr Ser Pro 745 671 Gln Gln Ser Gly Gln Gly Gln Leu Gly Gln Trp Leu Gln Pro Gly 755 760 765 674 Gln Gly Gln Gln Gly Tyr Tyr Pro Thr Ser Leu Gln Gln Thr Gly Gln 677 Gly Gln Gln Ser Gly Gln Gly Gln Gly Tyr Tyr Ser Ser Tyr His 790 795 680 Val Ser Val Glu His Gln Ala Ala Ser Leu Lys Val Ala Lys Ala Gln 683 Gln Leu Ala Ala Gln Leu Pro Ala Met Cys Arg Leu Glu Gly Gly Asp 820 825 686 Ala Leu Ser Ala Ser Gln 835 690 <210> SEQ ID NO: 5 uset (2207 691 <211> LENGTH: 789 692 <212> TYPE: PRT 693 <213> ORGANISM: Wheat 695 <223> OTHER INFORMATION: Bx7 E--> 697 <400> SEQUENCE: 5 699 Met Ala Lys Arg Leu Val Leu Phe Ala Ala Val Val Val Ala Leu Val 702 Ala Leu Thr Ala Ala Glu Gly Glu Ala Ser Gly Gln Leu Gln Cys Glu 705 His Glu Leu Glu Ala Cys Gln Gln Val Val Asp Gln Gln Leu Arg Asp 40 708 Val Ser Pro Gly Cys Arg Pro Ile Thr Val Ser Pro Gly Thr Arg Gln 55 711 Tyr Glu Gln Gln Pro Val Val Pro Ser Lys Ala Gly Ser Phe Tyr Pro 70 714 Ser Glu Thr Thr Pro Ser Gln Gln Leu Gln Gln Met Ile Phe Trp Gly 85 717 Ile Pro Ala Leu Leu Arg Arg Tyr Tyr Pro Ser Val Thr Ser Ser Gln 100 105 720 Gln Gly Ser Tyr Tyr Pro Gly Gln Ala Ser Pro Gln Gln Ser Gly Gln 723 Gly Gln Gln Pro Gly Gln Glu Gln Pro Gly Gln Gln Gln Asp 135 726 Gln Gln Pro Gly Gln Arg Gln Gln Gly Tyr Tyr Pro Thr Ser Pro Gln

155

727 145



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Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\05202005\J534742.raw

PATENT APPLICATION: US/10/534,742

RAW SEQUENCE LISTING

729 Gln Pro Gly Gln Gly Gln Leu Gly Gln Gly Gln Pro Gly Tyr Tyr 165 730 732 Pro Thr Ser Gln Gln Pro Gly Gln Lys Gln Gln Ala Gly Gln Gly Gln 180 185 735 Gln Ser Gly Gln Gly Gln Gly Tyr Tyr Pro Thr Ser Pro Gln Gln 200 738 Ser Gly Gln Gly Gln Pro Gly Gln Gly Gln Pro Gly Tyr Tyr Pro 215 741 Thr Ser Pro Gln Gln Ser Gly Gln Trp Gln Gln Pro Gly Gln Gly Gln 230 235 744 Gln Pro Gly Gln Gly Gln Gln Ser Gly Gln Gly Gln Gln Gln Gln 245 250 747 Pro Gly Gln Gly Gln Arg Pro Gly Gln Gly Gln Gln Gly Tyr Tyr Pro 265 750 Ile Ser Pro Gln Gln Pro Gly Gln Gly Gln Gln Ser Gly Gln Gly Gln 280 753 Pro Gly Tyr Tyr Pro Thr Ser Leu Arg Gln Pro Gly Gln Trp Gln Gln 756 Pro Gly Gln Gly Gln Gln Pro Gly Gln Gly Gln Gly Gln Gln Pro 310 315 759 Gly Gln Gly Gln Gln Ser Gly Gln Gly Gln Gly Tyr Tyr Pro Thr 330 762 Ser Leu Gln Gln Pro Gly Gln Gly Gln Leu Gly Gln Gly Fro 340 345 765 Gly Tyr Tyr Pro Thr Ser Gln Gln Ser Glu Gln Gly Gln Gln Pro Gly 355 360 768 Gln Gly Lys Gln Pro Gly Gln Gly Gln Gln Gly Tyr Tyr Pro Thr Ser 370 375 771 Pro Gln Gln Ser Gly Gln Gly Gln Leu Gly Gln Gly Gln Pro Gly 774 Tyr Tyr Pro Thr Ser Pro Gln Gln Ser Gly Gln Gly Gln Gln Ser Gly 410 777 Gln Gly Gln Gln Gly Tyr Tyr Pro Thr Ser Pro Gln Gln Ser Gly Gln 420 425 780 Gly Gln Gln Pro Gly Gln Gly Gln Ser Gly Tyr Phe Pro Thr Ser Arg 440 783 Gln Gln Ser Gly Gln Gly Gln Pro Gly Gln Gly Gln Gln Ser Gly 455 786 Gln Gly Gln Gln Gln Gln Pro Gly Gln Gly Gln Gln Ala Tyr Tyr 470 475 789 Pro Thr Ser Ser Gln Gln Ser Arg Gln Arg Gln Gln Ala Gly Gln Trp 485 490 792 Gln Arg Pro Gly Gln Gly Gln Pro Gly Tyr Tyr Pro Thr Ser Pro Gln 500 505 795 Gln Pro Gly Gln Glu Gln Gln Ser Gly Gln Ala Gln Gln Ser Gly Gln 520 798 Trp Gln Leu Val Tyr Tyr Pro Thr Ser Pro Gln Gln Pro Gly Gln Leu 801 Gln Gln Pro Ala Gln Gly Gln Pro Ala Gln Gly Gln Gln Ser Ala



Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\05202005\J534742.raw

550 802 545 804 Gln Glu Gln Gln Pro Gly Gln Ala Gln Gln Ser Gly Gln Trp Gln Leu 565 807 Val Tyr Tyr Pro Thr Ser Pro Gln Gln Pro Gly Gln Leu Gln Gln Pro 580 585 810 Ala Gln Gly Gln Gln Gly Tyr Tyr Pro Thr Ser Pro Gln Gln Ser Gly 600 813 Gln Gly Gln Gln Gly Tyr Tyr Pro Thr Ser Pro Gln Gln Ser Gly Gln 615 816 Gly Gln Gln Gly Tyr Tyr Pro Thr Ser Pro Gln Gln Ser Gly Gln Gly 817 625 630 635 819 Gln Gln Pro Gly Gln Gly Gln Pro Arg Gln Gly Gln Gly Tyr 645 650 822 Tyr Pro Ile Ser Pro Gln Gln Ser Gly Gln Gly Gln Pro Gly Gln 665 825 Gly Gln Gln Gly Tyr Tyr Pro Thr Ser Pro Gln Gln Ser Gly Gln Gly 828 Gln Gln Pro Gly His Glu Gln Gln Pro Gly Gln Trp Leu Gln Pro Gly 695 700 831 Gln Gly Gln Gln Gly Tyr Tyr Pro Thr Ser Ser Gln Gln Ser Gly Gln 715 834 Gly His Gln Ser Gly Gln Gly Gln Gly Tyr Tyr Pro Thr Ser Leu 725 730 837 Trp Gln Pro Gly Gln Gly Gln Gly Tyr Ala Ser Pro Tyr His Val 745 840 Ser Ala Glu Tyr Gln Ala Ala Arg Leu Lys Val Ala Lys Ala Gln Gln 755 760 765 843 Leu Ala Ala Gln Leu Pro Ala Met Cys Arg Leu Glu Gly Ser Asp Ala 770 775 846 Leu Ser Thr Arg Gln 847 785 850 <210> SEQ ID NO: 6 erset <2207 851 <211> LENGTH: 660 852 <212> TYPE: PRT 853 <213> ORGANISM: Wheat 855 <223> OTHER INFORMATION: Dy12 E--> 857 <400> SEOUENCE: 6 859 Met Ala Lys Arg Leu Val Leu Phe Ala Ala Val Val Ile Ala Leu Val 862 Ala Leu Thr Thr Ala Glu Gly Glu Ala Ser Arg Gln Leu Gln Cys Glu 20 25 865 Arg Glu Leu Gln Glu Ser Ser Leu Glu Ala Cys Arg Gln Val Val Asp 40 868 Gln Gln Leu Ala Gly Arg Leu Pro Trp Ser Thr Gly Leu Gln Met Arg 871 Cys Cys Gln Gln Leu Arg Asp Val Ser Ala Lys Cys Arg Ser Val Ala 874 Val Ser Gln Val Ala Arg Gln Tyr Glu Gln Thr Val Val Pro Pro Lys





Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\05202005\J534742.raw

877 Gly Gly Ser Phe Tyr Pro Gly Glu Thr Thr Pro Leu Gln Gln Leu Gln 878 105 880 Gln Gly Ile Phe Trp Gly Thr Ser Ser Gln Thr Val Gln Gly Tyr Tyr 120 125 115 883 Pro Ser Val Thr Ser Pro Arg Gln Gly Ser Tyr Tyr Pro Gly Gln Ala 135 886 Ser Pro Gln Gln Pro Gly Gln Gln Gln Pro Gly Lys Trp Gln Glu 150 155 889 Pro Gly Gln Gly Gln Gln Trp Tyr Tyr Pro Thr Ser Leu Gln Gln Pro 165 170 892 Gly Gln Gly Gln Gln Ile Gly Lys Gly Lys Gln Gly Tyr Tyr Pro Thr 180 185 895 Ser Leu Gln Gln Pro Gly Gln Gly Gln Gln Ile Gly Gln Gln Gln 200 898 Gly Tyr Tyr Pro Thr Ser Pro Gln His Thr Gly Gln Arg Gln Gln Pro 215 901 Val Gln Gly Gln Gln Ile Gly Gln Gly Gln Pro Glu Gln Gly Gln 904 Gln Pro Gly Gln Trp Gln Gln Gly Tyr Tyr Pro Thr Ser Pro Gln Gln 245 250 907 Leu Gly Gln Gly Gln Pro Gly Gln Trp Gln Gln Ser Gly Gln Gly 265 910 Gln Gln Gly His Tyr Pro Thr Ser Leu Gln Gln Pro Gly Gln Gly Gln 275 280 913 Gln Gly His Tyr Leu Ala Ser Gln Gln Gln Pro Ala Gln Gly Gln Gln 290 295 916 Gly His Tyr Pro Ala Ser Gln Gln Gln Pro Gly Gln Gly Gln Gln Gly 917 305 310 315 919 His Tyr Pro Ala Ser Gln Gln Pro Gly Gln Gly Gln Gln Gly His 325 922 Tyr Pro Ala Ser Gln Gln Glu Pro Gly Gln Gly Gln Gln Gly Gln Ile 340 925 Pro Ala Ser Gln Gln Gln Pro Gly Gln Gly Gln Gln Gly His Tyr Pro 355 360 928 Ala Ser Leu Gln Gln Pro Gly Gln Gln Gly His Tyr Pro Thr Ser Leu 375 380 931 Gln Gln Leu Gly Gln Gly Gln Ile Gly Gln Pro Gly Gln Lys Gln 390 395 934 Gln Pro Gly Gln Gly Gln Gln Thr Gly Gln Gly Gln Pro Glu Gln 405 410 937 Glu Gln Gln Pro Gly Gln Gly Gln Gln Gly Tyr Tyr Pro Thr Ser Leu 420 425 940 Gln Gln Pro Gly Gln Gly Gln Gln Gly Gln Gly Gln Gln Gly Tyr 440 943 Tyr Pro Thr Ser Leu Gln Gln Pro Gly Gln Gly Gln Gln His Tyr 455 946 Pro Ala Ser Leu Gln Gln Pro Gly Gln Gly Gln Gly Gln Pro Gly Gln 949 Arg Gln Gln Pro Gly Gln Gly Gln His Pro Glu Gln Gly Gln Pro



Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\05202005\J534742.raw

485 490 950 952 Gly Gln Gly Gln Gln Gly Tyr Tyr Pro Thr Ser Pro Gln Gln Pro Gly 955 Gln Gly Gln Gln Leu Gly Gln Gly Gln Gly Tyr Tyr Pro Thr Ser 525 515 520 958 Pro Gln Gln Pro Gly Gln Gly Gln Fro Gly Gln Gly Gln Gln Gly 535 961 His Cys Pro Met Ser Pro Gln Gln Thr Gly Gln Ala Gln Gln Leu Gly 550 555 964 Gln Gly Gln Gln Ile Gly Gln Val Gln Gln Pro Gly Gln Gly Gln Gln 565 570 967 Gly Tyr Tyr Pro Thr Ser Leu Gln Gln Pro Gly Gln Gly Gln Gln Ser 580 585 971 Gly Gln Gly Gln Gln Ser Gly Gln Gly His Gln Pro Gly Gln Gly Gln 595 600 974 Gln Ser Gly Gln Glu Lys Gln Gly Tyr Asp Ser Pro Tyr His Val Ser 977 Ala Glu Gln Gln Ala Ala Ser Pro Met Val Ala Lys Ala Gln Gln Pro 630 635 980 Ala Thr Gln Leu Pro Thr Val Cys Arg Met Glu Gly Gly Asp Ala Leu 645 983 Ser Ala Ser Gln 984 987 <210> SEQ ID NO: 7 insert <2207 988 <211> LENGTH: 648 989 <212> TYPE: PRT 990 <213> ORGANISM: Wheat 992 <223> OTHER INFORMATION: Dy10 E--> 994 <400> SEQUENCE: 7 996 Met Ala Lys Arg Leu Val Leu Phe Ala Ala Val Val Ile Ala Leu Val 999 Ala Leu Thr Thr Ala Glu Gly Glu Ala Ser Arg Gln Leu Gln Cys Glu 1002 Arg Glu Leu Gln Glu Ser Ser Leu Glu Ala Cys Arg Gln Val Val Asp 40 1005 Gln Gln Leu Ala Gly Arg Leu Pro Trp Ser Thr Gly Leu Gln Met Arg 1008 Cys Cys Gln Gln Leu Arg Asp Val Ser Ala Lys Cys Arg Ser Val Ala 1011 Val Ser Gln Val Ala Arg Gln Tyr Glu Gln Thr Val Val Pro Pro Lys 90 1014 Gly Gly Ser Phe Tyr Pro Gly Glu Thr Thr Pro Leu Gln Gln Leu Gln 100 105 1017 Gln Gly Ile Phe Trp Gly Thr Ser Ser Gln Thr Val Gln Gly Tyr Tyr 120 1020 Pro Gly Val Thr Ser Pro Arg Gln Gly Ser Tyr Tyr Pro Gly Gln Ala 140 1023 Ser Pro Gln Gln Pro Gly Gln Gln Gln Pro Gly Lys Trp Gln Glu 150 155





DATE: 05/20/2005

TIME: 12:13:02

RAW SEQUENCE LISTING PATENT APPLICATION: US/10/534,742

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\05202005\J534742.raw

1026 Pro Gly Gln Gly Gln Gln Trp Tyr Tyr Pro Thr Ser Leu Gln Gln Pro 165 170 1029 Gly Gln Gly Gln Gln Ile Gly Lys Gly Gln Gln Gly Tyr Tyr Pro Thr 185 190 180 1032 Ser Leu Gln Gln Pro Gly Gln Gly Gln Gly Tyr Tyr Pro Thr Ser 195 200 1035 Leu Gln His Thr Gly Gln Arg Gln Gln Pro Val Gln Gly Gln Gln Pro 215 1038 Glu Gln Gly Gln Pro Gly Gln Trp Gln Gln Gly Tyr Tyr Pro Thr 230 235 1041 Ser Pro Gln Gln Leu Gly Gln Gly Gln Pro Arg Gln Trp Gln Gln 245 250 1044 Ser Gly Gln Gly Gln Gly His Tyr Pro Thr Ser Leu Gln Gln Pro 260 265 1047 Gly Gln Gly Gln Gly His Tyr Leu Ala Ser Gln Gln Pro Gly 275 280 1050 Gln Gly Gln Gly His Tyr Pro Ala Ser Gln Gln Gln Pro Gly Gln 290 295 1053 Gly Gln Gln Gly His Tyr Pro Ala Ser Gln Gln Gln Pro Gly Gln Gly 310 1056 Gln Gln Gly His Tyr Pro Ala Ser Gln Glu Pro Gly Gln Gly Gln 325 330 1059 Gln Gly Gln Ile Pro Ala Ser Gln Gln Gln Pro Gly Gln Gln Gln 340 345 1062 Gly His Tyr Pro Ala Ser Leu Gln Gln Pro Gly Gln Gly Gln Gln Gly 355 360 1065 His Tyr Pro Thr Ser Leu Gln Gln Leu Gly Gln Gln Gln Thr Gly 370 375 1068 Gln Pro Gly Gln Lys Gln Gln Pro Gly Gln Gln Gln Thr Gly Gln 390 1069 385 395 1071 Gly Gln Gln Pro Glu Gln Gln Gln Pro Gly Gln Gly Gln Gln Gly 410 1074 Tyr Tyr Pro Thr Ser Leu Gln Gln Pro Gly Gln Gly Gln Gln Gln Gly 420 425 1077 Gln Gly Gln Gly Tyr Tyr Pro Thr Ser Leu Gln Gln Pro Gly Gln 440 1080 Gly Gln Gln Gly His Tyr Pro Ala Ser Leu Gln Gln Pro Gly Gln Gly 455 1083 Gln Pro Gly Gln Arg Gln Gln Pro Gly Gln Gly Gln His Pro Glu Gln 470 475 1086 Gly Lys Gln Pro Gly Gln Gly Gln Gly Tyr Tyr Pro Thr Ser Pro 485 490 1089 Gln Gln Pro Gly Gln Gly Gln Leu Gly Gln Gly Gln Gln Gly Tyr 500 505 1092 Tyr Pro Thr Ser Pro Gln Gln Pro Gly Gln Gly Gln Gln Pro Gly Gln 520 1095 Gly Gln Gln Gly His Cys Pro Thr Ser Pro Gln Gln Ser Gly Gln Ala 535 1098 Gln Gln Pro Gly Gln Gly Gln Ile Gly Gln Val Gln Gln Pro Gly





RAW SEQUENCE LISTING PATENT APPLICATION: US/10/534,742

DATE: 05/20/2005 TIME: 12:13:02

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\05202005\J534742.raw

1099	545					550					555				_	560
1101	Gln	Gly	Gln	Gln	Gly	Tyr	Tyr	Pro	Thr	Ser	Val	Gln	Gln	Pro	Gly	Gln
1102					565					570					575	
1104	Gly	Gln	Gln	Ser	Gly	Gln	Gly	Gln	Gln	Ser	Gly	Gln	Gly	His	Gln	Pro
1105	_			580					585					590		
1107	Gly	Gln	Gly	Gln	Gln	Ser	Gly	Gln	Glu	Gln	Gln	Gly	Tyr	Asp	Ser	Pro
1108	•		595					600					605			
1110	Tvr	His	Val	Ser	Ala	Glu	Gln	Gln	Ala	Ala	Ser	Pro	Met	Val	Ala	Lys
1111		610					615					620				
1113	Ala	Gln	Gln	Pro	Ala	Thr	Gln	Leu	Pro	Thr	Val	Cys	Arg	Met	Glu	Gly
1114						630					635					640
1116		Asp	Ala	Leu	Ser	Ala	Ser	Gln								
1117	- 1	•			645											
1120	<210)> SE	EO II	ONO:	: 8											
1121									,	,_	_ ~	_				
1122								. 0.	. / <	(2)	207					
1123					Whea	at		لادم	0.							
1125							: Bv	9								
1127							4									
1129	Met	Ala	Lvs	Ara	Leu	Val	Leu	Phe	Ala	Thr	Val	Val	Ile	Thr	Leu	Val
1130			-1-	5	5					10					15	
1132		Leu	Thr	Ala	Ala	Glu	Gly	Glu	Ala	Ser	Arg	Gln	Leu	Gln	Cys	Glu
1133		200		20			- 1		25		-			30		
1135	Ara	Glu	Leu		Glu	Ser	Ser	Leu	Glu	Ala	Cys	Arg	Gln	Val	Val	Asp
1136	5	0	35					40			•		45			
1138	Gln	Gln		Ala	Glv	Ara	Leu	Pro	Trp	Ser	Thr	Gly	Leu	Gln	Met	Arg
1139	Q.1.1.	50			1	5	55		-			60				
1141	Cvs		Gln	Gln	Leu	Ara	Asp	Val	Ser	Ala	Lys	Cys	Arg	Pro	Val	Ala
1142	-	0,0	V			70	_				75	-	_			80
1144	Val	Ser	Gln	Val	Val	Arq	Gln	Tyr	Glu	Gln	Thr	Val	Val	Pro	Pro	Lys
1145				-	85	-		•		90					95	
1147	Glv	Glv	Ser	Phe	Tvr	Pro	Gly	Glu	Thr	Thr	Pro	Leu	Gln	Gln	Leu	Gln
1148	1	1		100	4		•		105					110		
1150	Gln	Val	Ile		Trp	Gly	Thr	Ser	Ser	Gln	Thr	Val	Gln	Gly	Tyr	Tyr
1151			115		-	•		120					125			
1153	Pro	Ser		Ser	Ser	Pro	Gln	Gln	Gly	Pro	Tyr	Tyr	Pro	Gly	Gln	Ala
1154		130					135		_			140				
1156	Ser		Gln	Gln	Pro	Gly	Gln	Gly	Gln	Gln	Pro	Gly	Lys	Trp	Gln	Glu
1157	145					150					155					160
1159	Leu	Glv	Gln	Gly	Gln	Gln	Gly	Tyr	Tyr	Pro	Thr	Ser	Leu	His	Gln	Ser
1160		1			165		-	•	•	170					175	
1162	Glv	Gln	Glv	Gln		Gly	Tyr	Tyr	Pro	Ser	Ser	Leu	Gln	Gln	Pro	Gly
1163	1		- 2	180		-	•	•	185					190		
1165	Gln	Glv	Gln			Gly	Gln	Gly	Gln	Gln	Gly	Tyr	Tyr	Pro	Thr	Ser
1166		- 2	195			-		200			_	_	205			
1168	Leu	Gln			Gly	Gln	Gly	Gln	Gln	Ile	Gly	Gln	Gly	Gln	Gln	Gly
1169		210		_	4		215				_	220				
1171	Tvr			Thr	Ser	Pro	Gln	His	Pro	Gly	Gln	Arg	Gln	Gln	Pro	Gly
1172						230				-	235					240

E-->



RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/534,742

DATE: 05/20/2005 TIME: 12:13:02

1174 1175	Gln	Gly	Gln	Gln	Ile 245	Gly	Gln	Gly	Gln	Gln 250	Leu	Gly	Gln	Gly	Arg 255	Gln
1177 1178	Ile	Gly	Gln	Gly 260	Gln	Gln	Ser	Gly	Gln 265	Gly	Gln	Gln	Gly	Tyr 270	Tyr	Pro
1180 1181	Thr	Ser	Pro 275		Gln	Leu	Gly	Gln 280	Gly	Gln	Gln	Pro	Gly 285	Gln	Trp	Gln
1183 1184	Gln	Ser 290		Gln	Gly	Gln	Gln 295	Gly	Tyr	Tyr	Pro	Thr	Ser	Gln	Gln	Gln
1186 1187			Gln	Gly	Gln	Gln 310		Gln	Tyr	Pro	Ala 315	Ser	Gln	Gln	Gln	Pro 320
1189 1190	Gly	Gln	Gly	Gln	Gln 325		Gln	Tyr	Pro	Ala 330		Gln	Gln	Gln	Pro 335	Gly
1192 1193	Gln	Gly	Gln	Gln 340		Gln	Tyr	Pro	Ala 345	Ser	Gln	Gln	Gln	Pro 350	Gly	Gln
1195 1196	Gly	Gln	Gln 355		His	Tyr	Leu	Ala 360		Gln	Gln	Gln	Pro 365	Gly	Gln	Gly
1198 1199	Gln	Gln 370		His	Tyr	Pro	Ala 375		Leu	Gln	Gln	Pro 380	Gly	Gln	Gly	Gln
1201 1202			His	Tyr	Thr	Ala 390		Leu	Gln	Gln	Pro 395	Gly	Gln	Gly	Gln	Gln 400
1204 1205		His	Tyr	Pro	Ala 405	Ser	Leu	Gln	Gln	Val 410	Gly	Gln	Gly	Gln	Gln 415	Ile
1207 1208	Gly	Gln	Leu	Gly 420	Gln	Arg	Gln	Gln	Pro 425	Gly	Gln	Gly	Gln	Gln 430	Thr	Arg
1210 1211	Gln	Gly	Gln 435	Gln	Leu	Glu	Gln	Gly 440	Gln	Gln	Pro	Gly	Gln 445	Gly	Gln	Gln
1213 1214	Thr	Arg 450	Gln	Gly	Gln	Gln	Leu 455	Glu	Gln	Gly	Gln	Gln 460	Pro	Gly	Gln	Gly
1216 1217		Gln	Gly	Tyr	Tyr	Pro 470	Thr	Ser	Pro	Gln	Gln 475	Ser	Gly	Gln	Gly	Gln 480
1219 1220	Gln		_		485					490					495	
1222 1223				500					505					510		
1225 1226			515					520					525			
1228 1229		530					535					540				
1231 1232	545					550					555					560
1235					565					570					575	
1238		_		580					585					590		Pro
1241			595					600					605			Gln
1244		610					615					620				Tyr
1246	Pro	Ile	Ser	Leu	Gln	Gln	Ser	Gly	Gln	Gly	Gln	Gln	Ser	Gly	Gln	Gly





Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\05202005\J534742.raw

	1247						630					635		_	_		640
	1249	Gln	Gln	Ser	Gly	Gln	Gly	His	Gln	Leu		Gln	Gly	Gln	Gln		Gly
	1250					645					650					655	
	1252	Gln	Glu	Gln	Gln	Gly	Tyr	Asp	Asn		Tyr	His	Val	Asn		Glu	Gln
	1253				660					665					670		
	1255	Gln	Thr	Ala	Ser	Pro	Lys	Val		Lys	Val	Gln	Gln		Ala	Thr	Gln
	1256			675	•				680					685			_
	1258	Leu	Pro	Ile	Met	Cys	Arg		Glu	Gly	Gly	Asp		Leu	Ser	Ala	Ser
	1259		690					695					700				
	1261	Gln															
	1262	705															
	1265																
	1266	<211	L> L	ENGTI	I: 60)2			•	, ,	/~ ~	_					
	1267	<212	2> T	PE:	PRT			11	ser	オく	20	0/					
	1268	<213	3> OF	RGAN :	SM:	Whea	at	N									
	1270						rion:	: glı	1Aد								
>	1272	<400)> SI	ZQUEI	ICE:	9						_	_			_	
	1274	Met	Ala	Lys	Arg	Leu	Val	Leu	Phe	Ala		Val	Val	Ile	Gly		Val
	1275					5			_	_	10			_		15	~1
	1277	Ser	Leu	Thr		Ala	Glu	Gly	Glu		Ser	Lys	GIn	Leu		Cys	GIU
	1278				20	_			_	25	_ =	_	_	_	30	** . 7	3
	.1280	Arg			Gln	Glu	Ser	Ser		Glu	Ala	Cys	Arg		vai	vaı	Asp
	1281			. 35	_			_	40	_	_		~7	45	01	3.7.a.k	7
	1283	Gln		Leu	Ala	Ser	Arg		Pro	Trp	Ser	Thr		ьeu	GIn	мет	Arg.
	1284		50		-	_	_	55		_		.	60	7	D	*** 1	71.
	1286		Cys	Gln	GIn	Leu		Asp	шe	ser	Ala		Cys	Arg	Pro	vai	80
	1287		_	~-3			70	a 1		a1	~1 ~	75	77.0	1707	Dwo	Dro	
	1289	Leu	Ser	GIn	vaı		Arg	GIN	Tyr	GLY	90	THE	Ala	val	PIO	95	пур
	1290 1292	~ 1	~ 1	B	Dl	85 T	TT-:	71	<i>α</i> 1	mh w		Dro	T 011	Cln	Gln	-	Gln
		GIY	GIY	Pro		Tyr	HIS	Arg	GIU	105	TIII	PIO	пец	GIII	110	пец	GIII
	1293 1295	a1	~1	т1 -	100	~1	C1	Thr	cor		Gln	Thr	Val	Gln		Tyr	Tyr
	1295	GIII	GIY	115	FILE	GIY	GIY	1111	120	261	GIII	1111	vai	125		- 7 -	- 7 -
	1298	Dro	Cor		Tlo	Sar	Dro	Gln		Glv	Ser	Tvr	Tvr		Glv	Gln	Ala
	1299	PIO	130	Vai	116	Der	110	135	0111	019	001	- 1 -	140		4- 1		
	1301	Sar		Gln	Gln	Pro	Glv		Trp	Gln	Glu	Leu		Gln	Glv	Gln	Gln
	1301		110	GIII	0111	110	150	<i></i> 1		V	020	155	0-1		1		160
	1302		Tvr	Tvr	Pro	Thr		Leu	Gln	Gln	Pro		Gln	Glv	Gln	Gln	Gly
	1305	112	- 7 -	- 7 -		165	501				170	2		•		175	-
	1307	Tvr	Tvr	Ara	Thr	Ser	Leu	Gln	Gln	Pro		Gln	Arq	Gln	Gln	Gly	Tyr
	1308	- 1 -	-1-	5	180	-00				185			,		190	-	-
	1310	Tvr	Ara	Thr		Leu	Gln	Gln	Pro	Glv	Gln	Gly	Gln	Gln	Ile	Gly	Gln
	1311	-1-	9	195					200	- 4		-		205		_	
	1313	Trp	Gln		Gly	Tyr	Tyr	Pro		Ser	Pro	Gln	His	Pro	Gly	Gln	Gly
	1314	- 1-	210		2	4	4	215					220				
	1316	Gln		Pro	Gly	Gln	Val	Gln	Lys	Ile	Gly	Gln	Gly	Gln	Gln	Pro	Glu
	1317	225					230					235					240
	1319	Lys	Gly	Gln	Gln	Leu	Gly	Gln	Glu	Gln	Gln	Ile	Gly	Gln	Gly	Gln	Gln
	1320	-	-			245					250					255	

E-->





1322 1323	Pro	Glu	Gln	Gly 260	Gln	Gln	Pro	Gly	Gln. 265	Gly	Gln	Gln	Pro	Gly 270	Gln	Gly
1325 1326	Gln	Gln	Gly 275		Tyr	Pro	Thr	Ser 280	Leu	Gln	Gln	Pro	Gly 285	Gln	Gly	Gln
1328	Gln	Pro		Gln	Trp	Gln			Gly	Gln	Gly	Gln	Gln	Gly	Tyr	Tyr
1329		290					295				~7	300	a 1	*** _	m	D
1331	Pro	Thr	Ser	Leu	Gln	Gln	Pro	Val	GIn	GIY		GIn	GIY	HIS	ıyr	
1332	305					310			_		315				_	320
1334	Ala	Ser	Gln	His	Gln	Pro	Gly	Gln	Gly		GIn	Gly	His	GIn	Pro	Ala
1335					325				_	330	_		•	_	335	_
1337	Ser	Leu	Gln	Leu	Ser	Gly	Gln	Gly		Gln	Gly	His	Hıs	Pro	Ala	Ser
1338				340					345			_		350		_
1340	Leu	Gln	Gln	Pro	Gly	Gln	Gly		Gln	Thr	Gly	Gln		Glu	Gln	Arg
1341			355					360					365	_		
1343	Gln	Gln	Pro	Gly	Gln	Gly	Gln	Gln	Thr	Gly	Gln	Gly	Gln	Gln	Pro	GIu
1344		370					375					380				
1346	Gln	Glu	Gln	Gln	Pro	Gly	Gln	Gly	Gln	Gln	Gly	Tyr	Tyr	Pro	Thr	Tyr
1347	385					390					395					400
1349	Leu	${\tt Gln}$	Gln	Pro	Gly	Gln	Gly	Gln	Gln	Pro	Glu	Gln	Trp	Gln		Pro
1350					405					410					415	_
1352	Gly	Gln	Gly	Gln	Gln	Gly	His	Tyr	Pro	Ala	Ser	Leu	Gln	Gln	Ser	Gly
1353				420					425					430		
1355	Gln	Gly	Gln	Gln	Gly	His	Tyr	Pro	Ala	Ser	Leu	Gln	Gln	Leu	Gly	Gln
1356			435					440					445			
1358	Gly	Gln	Pro	Gly	Gln	Thr	Gln	Gln	Pro	Gly	Gln	Gly	Gln	Gln	Pro	Glu
1359	_	450					455					460				
1361	Gln	Glu	Glu	Gln	Ser	Gly	Gln	Gly	Gln	Gln	Gly	Tyr	Tyr	Pro	Thr	Ser
1362	465					470					475					480
1364	Pro	Gln	Gln	Pro	Gly	Gln	Gly	Gln	Gln	Gly	His	Phe	Pro	Thr	Ser	Gly
1365					485					490					495	
1367	Gln	Ala	Gln	Gln	Pro	Gly	Gln	Gly	Gln	Gln	Ile	Gly	Gln	Ala	Gln	Gln
1368				500					505					510		
1370	Leu	Gly	Gln	Gly	Gln	Gln	Gly	Tyr	Tyr	Pro	Thr	Ser	Leu	Gln	Gln	Pro
1371			515					520					525			
1373	Gly	Gln	Glu	Gln	Gln	Ser	Gly	Gln	Gly	Gln	Gln	Leu	Gly	Gln	Gly	His
1374		530					535					540				
1376	Gln	Pro	Gly	Gln	Gly	Gln	Gln	Ser	Gly	Gln	Glu	Gln	Gln	Gly	Tyr	Asp
1377	545					550					555					560
1379	Ser	Pro	Tyr	His	Val	Ser	Val	Glu	Gln	Gln	Ala	Ala	Ser	Pro	Lys	Val
1380			_		565					570					575	
1382	Ala	Lys	Ala	His	His	Pro	Val	Ala	Gln	Leu	Pro	Thr	Met	Cys	Gln	Met
1383				580					585					590		
1385	Glu	Gly	Gly	Asp	Ala	Leu	Ser	Ala	Ser	Gln						
1386		_	595	_				600								
1517	<21	0> S	EQ I	D NO	: 11											
1518								•	,	/						
1519							1	nsl	nt <	2	07					
1520	<21	3> 0	RGAN	ISM:	whe	at										
1522	<22	3 > 0	THER	INF	ORMA	TION	: pr	eser	ved	C-te	rmin	al m	otif			
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RAW SEQUENCE LISTING PATENT APPLICATION: US/10/534,742

DATE: 05/20/2005

TIME: 12:13:02

Input Set : A:\Sequence Listing.txt Output Set: N:\CRF4\05202005\J534742.raw

E--> 1524 <400> SEQUENCE: 11

1526 Leu Lys Val Ala Lys Ala Gln Gln Leu Ala Ala Gln Leu Pro Ala Met

10 1527 1

1529 Cys Arg

This needs to be explained in 12207-12237 section. Hive source of genetic material. <210> 44 <211> PRT / Artificial sequence <220> <221> misc feature <222> <223> Xaa is any residue <220> <223> Gln in position 4 is the amino acid to be mutated <400> 44 Gln Xaa Pro Gln Gln Pro Gln Gln Phe

> same enn in Seguences 36 though 40, 41-43



DATE: 05/20/2005 TIME: 12:13:03

PATENT APPLICATION: US/10/534,742

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\05202005\J534742.raw

L:10 M:270 C: Current Application Number differs, Wrong Format
L:30 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:1
L:196 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:2
L:359 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:3
L:528 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:4
L:697 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:5
L:857 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:6
L:994 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:7
L:1127 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:8
L:1272 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:9
L:1524 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:11
L:1637 M:283 W: Missing Blank Line separator, <220> field identifier
L:2062 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:0